



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX – PACIFIC SOUTHWEST REGION
75 Hawthorne Street
San Francisco, CA 94105-3901

NOV 25 2019

VIA CERTIFIED MAIL
No. 7018 0680 0000 3319 8482
RETURN RECEIPT REQUESTED
In Reply Refer To: ENF-3-1

Mr. Jay Rao
Environmental Engineer
Dos Cuadras Offshore Resources, LLC
290 Maple Court, Suite 290
Ventura, CA 93003

Re: Clean Water Act Compliance Evaluation Inspection

Dear Mr. Rao:

Enclosed is the report for the September 23, 2019 inspection of the DCOR's Platform Edith. Contact EPA within 14 calendar days of receipt of this letter if any factual disputes are identified. Please provide written response to the Areas of Concern section of this report by January 15, 2020.

We would like to thank you for your cooperation during the inspection. If you have any questions, please call Michael Weiss at (415) 947-4570 or e-mail him at weiss.michael@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Magnan", is written over the typed name.

for Eric Magnan
Manager, Water Section I
Enforcement & Compliance Assurance Division

Enclosure

cc (w/enclosure by email):

James Salmons, BSEE. Environmental Compliance Officer
Brent Cook, DCOR, Lead Operator
Steve Calhoun, DCOR, Foreman

**Region 9 Enforcement Division
75 Hawthorne Street
San Francisco, CA 94105**

Inspection Date(s):	September 23, 2019		
Time:	Entry: 7:10am	Exit: 10:00am	
Media:	Water		
Regulatory Program(s)	Clean Water Act NPDES		
Company Name:	Dos Cuadras Offshore Resources, LLC (DCOR)		
Facility or Site Name:	Platform Edith		
Facility/Site Physical Location:	Platform Edith, Pacific Ocean Lease OCS-P 0296		
Geographic Coordinates:	33°35'44.46"N, 118° 8'29.20"W		
Mailing address:	290 Maple Court, Suite 290 Ventura, CA 93003		
Facility/Site Contact:	Jay Rao	Title: Environmental Engineer	
	Phone: 805-535-2078	Email: jrao@dcorllc.com	
Facility/Site Identifier:	NPDES Permits CAG280000 and CAF001150		
NAICS:	211111 - Crude petroleum and natural gas extraction		
SIC:	1311		
Facility/Site Personnel Participating in Inspection:			
Name	Affiliation	Title	Email
Brent Cook	DCOR	Lead Operator	bcook@dcorllc.com
Steve Calhoun	DCOR	Foreman	scalhoun@dcorllc.com
EPA Inspector(s):			
Michael Weiss	US EPA	Environmental Engineer	Weiss.Michael@epa.gov
Adam Howell	US EPA	Environmental Engineer	Howell.Adam@epa.gov
Inspection Report Author:	Michael Weiss	415-947-5470	
	<i>Michael Weiss</i>	Date: 11/22/2019	
Supervisor Review:	Eric Magnan	415-947-4179	
	<i>EJM</i>	Date: 11-22-19	

SECTION I – INTRODUCTION

I.1 Purpose of the Inspection

On September 23, 2019, Michael Weiss and Adam Howell from the U.S. EPA Region 9 Enforcement Division (hereafter, we or inspection team) conducted a Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) inspection of the DCOR, LLC (DCOR or Discharger) – Platform Edith (hereafter, Facility or Platform) offshore oil and gas platform. The purpose of the inspection was to evaluate compliance with the requirements of the EPA Region 9 NPDES Permit Nos. CAG280000 and CAF001150 (hereafter, Permit).

During the inspection we evaluated the accuracy and reliability of the Discharger's self-monitoring and reporting program and the Facility onsite generated waste streams, treatment processes, and discharges to the Pacific Ocean. The announced inspection consisted of two parts: a records review and a general Facility walk through. The Facility Representatives were Steve Calhoun (Foreman, DCOR) and Brent Cook (Lead Operator, DCOR). The site contact, Jay Rao (Environmental Engineer, DCOR), was unable to attend the inspection. Upon arriving at the Platforms on September 23, 2019, we met with the Facility Representatives, and presented our CWA credentials and explained the purpose of the inspection.

SECTION II – FACILITY / SITE DESCRIPTION

II.1 Facility Description

Platform Edith is located offshore from Long Beach, CA and produces oil and gas from the Beta Field (Lease OCS-P 0296). The Platform was first installed in January 1983 and began production in January 1984. Platform Edith is approximately 8.5 miles from land, has 72 well slots, and is at a water depth of 161 feet. As of October 1, 2017, Platform Edith has a cumulative oil production of 9,881,000 bbls (barrels) and cumulative gas production of 6,654,000 mcf (thousand cubic feet).

At the time of the inspection, the Facility was in “production” operations, actively recovering hydrocarbons from the field formation. According to Facility Representatives at the time of the inspection, the Platform was producing approximately 430 bbls of oil per day from 14 active wells. Facility Representatives stated that, the following NPDES discharges occur or may occur from the Facility:

- Produced Water (Discharge 002)
- Deck Drainage (Discharge 004)
- Sanitary and Domestic Wastewater (Discharge 005)
- Desalination Unit Wastewater (Discharge 007)
- Fire Control System Water (Discharge 008)

II.2 Wastewater Sources

Note the discharge number (i.e., Discharge 002) referenced throughout this report refers to the type of wastewater discharged at the corresponding outfall point as designated in the Permit.

A general description of the process train(s) for each of the above-mentioned discharges is described below:

Produced Water (Discharge 002) is water (brine) associated with the extraction of oil and gas from the hydrocarbon-bearing strata which may include formation water, injection water, oil emulsions, and any chemicals added downhole or during the oil/water separation process. Produced Water, oil, and gas is routed to three-phase and two-phase separators on the Production Deck (Photograph 1). According to Facility Representatives, Produced Water is either discharged from Platform Edith or injected back into the production well for enhanced oil recovery (EOR). The representatives further stated that Discharge 002 occurs 160 feet underwater via a submerged open-bottom discharge tank with the intention that any unremoved oil would float and remain within the submerged tank and not be discharged to the ocean. Facility Representatives stated that they periodically pump out the Discharge 002 open-bottom discharge tank 160 feet underwater.

Any separated oil on Platform Edith is piped off the platform through a Lease Automatic Custody Transfer (LACT) Unit to the nearby Beta Platform Elly. The LACT Unit contains metering equipment designed to accurately gauge the volume and quality of crude oil as it changes custody from one party to another.

Deck Drainage (spillage, washdown, rainwater, drip pan and work area drains – Discharge 004) is collected throughout the platform via floor drains into a sump tank (Tank 7) on the Subdeck. The top most platform level (Drill Deck) and next level (Production Deck) are where the majority of oil related operations occur and are enclosed with berms and floor trenches that flow to Tank 7 on the Subdeck. Facility Representatives stated that there is discharge of Deck Drainage at Platform Edith on a frequent basis.

Sanitary Wastewater (Discharge 005) is treated onsite at the Facility with a redFox environmental marine sanitation device (MSD) Fox Pac Model No. RF-500-FP, which is United States Coast Guard (USCG) approved (Photograph 2). According to Facility Representatives, treated water is discharged (Discharge 005) to the Pacific Ocean via the same pipe as the Produced Water. The onsite Facility representatives stated that the daily discharge water flow rate is estimated based on the number of people on the platform and the time spent per person. The MSD unit is sized for a maximum of 500 gallons per day (gpd).

Desalination (i.e., reverse osmosis) unit wastewater (Discharge 007) is generated during the process of creating freshwater from saltwater. According to onsite Facility representatives, the desalination unit (Photograph 3) only provides water to sinks and showers at the Facility. The desalination unit wastewater is discharged without treatment and was not being discharged at the time of the inspection.

Fire control system water (seawater released during training, testing, and maintenance of fire protection equipment – Discharge 008) is composed of pure seawater that can be circulated throughout the Platform and is tested weekly. The Fire control water is discharged without treatment. The discharge was not witnessed by the inspection team.

Well Treatment, Completion and Workover Fluids (Discharge 003) are listed as “no discharge” on the monitoring reports, yet those fluids are used on the Platform. “Well completion fluids” shall refer to salt solutions, weighted brines, polymers, and various additives used to prevent damage to the well bore during operations which prepare the drilled well for hydrocarbon production. “Well treatment fluids” shall refer to any fluid used to restore or improve productivity by chemically or physically altering hydrocarbon-bearing strata after a well has been drilled. “Workover fluids” shall refer to salt solutions, weighted brines, polymers, or other specialty additives used in a producing well to allow for maintenance, repair or abandonment procedures (see 40 CFR Part 435.11). See Sections III.9, IV.5, and IV.6 for more details.

II.3 Wastewater Treatment

The inspection team observed and interviewed Facility Representatives to see how Produced Water (Discharge 002) is treated and disposed. Produced Water, oil, and gas is routed to phase production separators. From the well bay, the gross fluid (oil, water, and gas) goes through heat exchangers that raise the fluid temperature to 180 °C. From there the gross fluid goes through two three-phase separators and then a dehydrator. Separated natural gas produced on the Platform is eventually burned in microturbines located on the Drill Deck in order to generate on-site electricity.

From the dehydrator, the Produced Water then goes to further treatment in a corrugated plate interceptor (CPI) gravity oil water separator (Tank 3). Next the Produced Water enters a mechanical induced gas flotation WEMCO oil and water separator (Tank 4 and Photograph 4). The WEMCO unit has 4 aerators and added polymer for improved separation. The WEMCO oil and water separator is located on the Production Deck along with all the other separators previously discussed in this paragraph. Following the WEMCO unit, Produced Water is sent to clean water Tank 6, a treated Produced Water holding tank where the NPDES sampling port is located. A picture of the control system display screen shows the tanks and general layout of the Production Deck (Photograph 7). Note that tanks in Photograph 7 are labelled as “TK-#”.

The Produced Water (Discharge 002) NPDES sampling point is located off a discharge pipe for Tank 6 (Photograph 8). The inspection team witnessed an operator take an internal process control Produced Water effluent sample. The Discharger conducts internal process monitoring for Oil and Grease in Produced Water after filtration via turbidity measurements utilizing a HACH 2100Q turbidimeter. At the time of the inspection, we observed the turbidity measurement of Produced Water to be 10.8 nephelometric turbidity units (NTUs). Every 4 hours

an operator takes a sample from the NPDES sampling port from Tank 6 and runs the sample through the turbidimeter. Facility Representatives stated that if the turbidity exceeds 30 NTU corrective actions are to be taken. The Facility representatives stated that the 30 NTU action level was to ensure the Produced Water (Discharge 002) did not exceed the Permit monthly average and daily maximum Oil and Grease effluent limits of 29 mg/L and 42 mg/L, respectively.

According to Facility Representatives, the treated Produced Water is re-injected into the oil formation through 2 water injection wells. However, there is more Produced Water than can be injected, and excess Produced Water is discharged to the Pacific Ocean via a submerged outfall. According to a Daily Production Report (Appendix 2), the Facility had discharged 548 barrels of Produced Water and injected 661 barrels of Produced Water on September 22, 2019.

Deck Drainage (Discharge 004) appears to also be treated before being discharged via the same 160-foot submerged open-bottom discharge tank as Produced Water. According to Facility Representatives, Tank 7 (Photograph 5) operates via an automatic level sensor that pumps all Deck Drainage into a holding wastewater tank (Tank 8) on the Production Deck. From Tank 8, the Deck Drainage flows to Tank 9 (Photograph 6), which contains a CPI gravity oil water separator. Any recovered oil is returned to the Produced Water treatment process, while the treated Deck Drainage wastewater is commingled with Produced Water post compliance sampling from Tank 6.

Sanitary wastewater (Discharge 005) is treated via a redFox MSD (Photograph 2). The self-contained treatment system is composed of an aeration chamber, flocculation, solids settling, media filtration, and disinfection. The Platform uses chlorine tablets for disinfection and checks the chlorine residual daily. Facility Representatives state the MSD is serviced annually by a contractor.

Domestic and Sanitary Wastes (Discharge 005), Footnote 2, of the Permit states “any facility which properly operates and maintains a marine sanitation device (MSD) that was certified by the United States Coast Guard (USCG) under Section 312 of the Act shall be deemed to be in compliance with permit limitations for sanitary wastes and the requirements for total residual chlorine do not apply.”

The commingled wastewater (Deck Drainage, sanitary wastewater, and Produced Water) is discharged to the Pacific Ocean via the 160-foot submerged outfall.

II.4 Compliance History

Platform Edith Discharge Monitoring Reports (DMRs) reviewed by the inspection team did not indicate any reported effluent violations during the period of review (January 2016 through July 2019). All reported sources of wastewater discharge (Produced Water, Deck Drainage, sanitary,

desalination, and fire control system) had no reported effluent exceedances. The Discharger reported “No Discharge” on all DMRs from July 2017 to July 2019 (except January 2019) for Deck Drainage (Discharge 004). During the period of review (January 2016 through July 2019), Deck Drainage was only discharged in 12 months.

DMRs for Produced Water (Discharge 002) reviewed by the inspection team did not indicate any reported effluent exceedances during the period of review (January 2016 through July 2019). According to the DMRs, Platform Edith discharged Produced Water in all 43 months at an average volume of 747 bbls/day. The Oil and Grease values for the monthly average and daily maximum were all below the discharge limits (Table 6 of the Permit).

The Produced Water effluent passed all required annual toxicity tests (7 Day Chronic *Atherinops affinis*, 48Hr Chronic *Haliotis rufescens*, and 48Hr Chronic *Macrocystis pyrifera*).

SECTION III – OBSERVATIONS

1. Facility representatives stated that all the natural gas produced on the Platform is burned in two Capstone microturbines located on the Drill Deck in order to generate on-site electricity (Photograph 9).
2. The NPDES permit, daily reports, and DMRs were all well organized and readily available on an electronic share drive accessible on the Platform.
3. Facility Representatives stated that they periodically pump out the Discharge 002 open-bottom discharge tank 160 feet underwater (Photograph 10). Approximately 30-40 gallons are pumped out for visual observation to ensure the oil water separation process is working.
4. The Facility Representatives provided a log book of turbidity monitoring for Produced Water as a process control proxy for Oil and Grease (Photograph 11). The log book shows that every 4 hours an operator takes a sample from the NPDES sampling port from Tank 6 and runs the sample through a bench type Hach 2100Q turbidity meter. Facility Representatives stated that if the turbidity exceeds 30 NTU corrective actions are taken. An example of a corrective action provided by representatives was that if the turbidity was above 30 NTU, the Facility would inject more Produced Water in the well formation.
5. Facility Representatives provided documentation for the last four years of the Hach 2100Q turbidimeter calibrations on Platform Edith. The documentation showed that the turbidimeter is calibrated every 3 months (Photograph 12).
6. The NPDES water sampling procedures for Produced Water (002) were posted within the Platform Control Room (Photograph 13). The sampling procedures included the EPA methods, frequency, and container type.

7. According to Facility Representatives, Tank 7 operates via an automatic level sensor that pumps all Deck Drainage into a holding wastewater tank (Tank 8) on the Production Deck. From Tank 8, the Deck Drainage flows to Tank 9, which contains a corrugated plate interceptor (CPI) gravity oil water separator. The commingled wastewater (Deck Drainage, sanitary wastewater, and Produced Water) is discharged to the Pacific Ocean via the 160-foot submerged outfall. The Deck Drainage discharged via this shared outfall did not appear to have any flow monitoring or sampling ports (Photograph 14).
8. The Facility Representatives stated that Tank 1 (Wet oil) and Tank 2 (Dirty oil), located on the Production Deck, were where any remaining liquid hydrocarbons from the gas plant extraction were sent. The contents of those tanks were then routed to the beginning of the Produced Water treatment process.
9. During the records review, a Chemical Inventory of Well Treatment, Completion and Workover Fluids, provided by the Facility, for September 1, 2016 thru November 30, 2016 (Appendix 3) was identified yet the corresponding DMRs listed no discharge of Well Treatment, Completion and Workover Fluids. The chemical listed in the Chemical Inventory (PEP2HF (Petrolite) Chemical Soak for Wax Build up) was likely injected into a well at some point, became commingled with gross fluid, and was eventually discharged with the treated Produced Water. Further, the chemical inventory does not include the chemical formulation and concentrations of the fluid used for well treatment, completion and workover fluids.

SECTION IV – AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

1. **Operation and maintenance.** The Permit Part IV. Standard Conditions (e) Proper operation and maintenance (40 CFR Part 122.41(e)) states “The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit.” There was rust and corrosion present throughout the Platform. While this is to be expected in a marine environment, the Facility should ensure that the corrosion does not negatively impact the operations of the Platform and its ability to comply with the Clean Water Act. Corroded valves and piping could fail to operate as intended resulting in a potential unauthorized discharge to the Ocean.
2. **Documentation.** Facility Representatives should provide documentation that they pump out the Discharge 002 open-bottom discharge tank 160 feet underwater including visual observation notes or log-books. Facility Representatives stated the pumped out discharge is sent to a sump tank and then returned to Produced Water treatment train. Please include a process schematic of the open-bottom discharge tank with dimensions and a description of the overall process.

3. **Reporting of Commingled Wastestreams.** Part II.B.3, Produced Water Commingled Waste Streams, of the Permit, states “If Deck Drainage, work over, completion, well treatment or test fluids or other authorized discharges are commingled with Produced Water “commingled” shall be reported on the DMRs for both Produced Water and the waste stream mixed with it.”

As a result of our DMR review, we observed that the Discharger did not appear to clearly report on the DMRs that Deck Drainage (Discharge 004) and sanitary wastewater (Discharge 005) were “commingled” with Produced Water discharges (Discharge 002). We observed that the Discharger reported “No Discharge” on all DMRs from July 2017 to July 2019 (except January 2019) for Deck Drainage (Discharge 004).

Further, according to DMRs, Deck Drainage (004) was only discharged in 12 months over the period of review (January 2019, June 2017, April 2017, February 2017, January 2017, December 2016, August 2016, June 2016, May 2016, April 2016, March 2016, and February 2016). This appears to be inconsistent with observations and interviews with Facility Representatives, as it appeared Deck Drainage was being discharged commingled on a more frequent basis.

For sanitary wastewater (005), only the Effluent Limitations and Monitoring Requirements (Table 9 of the Permit) for Sanitary wastewater were reported on reviewed DMRs. This is not consistent with the Permit requirements, as “commingled” was not reported on the DMRs for both Produced Water and the waste stream mixed with it (Sanitary wastewater).

4. **Sampling and Reporting of Deck Drainage.** Part II.D.2, Deck Drainage Commingled Waste Streams, of the Permit, states “If Deck Drainage is commingled with Produced Water, then effluent limitations and monitoring requirements for Deck Drainage do not apply. Effluent limitations and monitoring requirements for Produced Water apply.”

Based on observations and interviews with Facility Representatives, we observed that the Discharger was not sampling the Deck Drainage (004) for the Produced Water Effluent Limitations and Monitoring Requirements (Table 6 of the Permit). Specifically, there was no Oil and Grease or Flow rate measurements for the Deck Drainage discharge that was being commingled with the Produced Water.

5. **Reporting of Well Treatment Discharge.** Well Treatment, Completion and Workover Fluids (Discharge 003) are listed as no discharge on the DMRs yet the inspection team has reason to believe that Well Treatment, Completion and Workover Fluids are discharged commingled with Produced Water. Part II.C.2, Well Treatment, Completion and Workover Fluids (Discharge 003) Commingled Waste Streams, of the Permit states “If well treatment, completion or workover fluids are commingled with produced water, then effluent limitations and monitoring requirements for well treatment, completion and workover fluids do not apply. Effluent limitations and monitoring requirements for produced water apply. In addition, for a commingled discharge, the discharge volume of produced water and the discharge volume of well treatment, completion and workover fluids shall both be reported.”

6. **Reporting of Well Treatment Chemical Inventory.** Part II.C.3, Well Treatment, Completion and Workover Fluids (Discharge 003) Chemical Inventory, of the Permit states “The Permittee shall maintain an inventory of the quantities and concentrations of the specific chemicals used to formulate well treatment, completion and workover fluids. If there is a discharge of these fluids, the chemical formulation, concentrations and discharge volumes of the fluids shall be submitted with the DMR.” We observed that the Discharger did not submit with DMRs a chemical inventory including chemical formulation and concentrations of these fluids used for well treatment, completion and workover fluids. It should also be noted that no discharge volume was reported as well.

APPENDICES

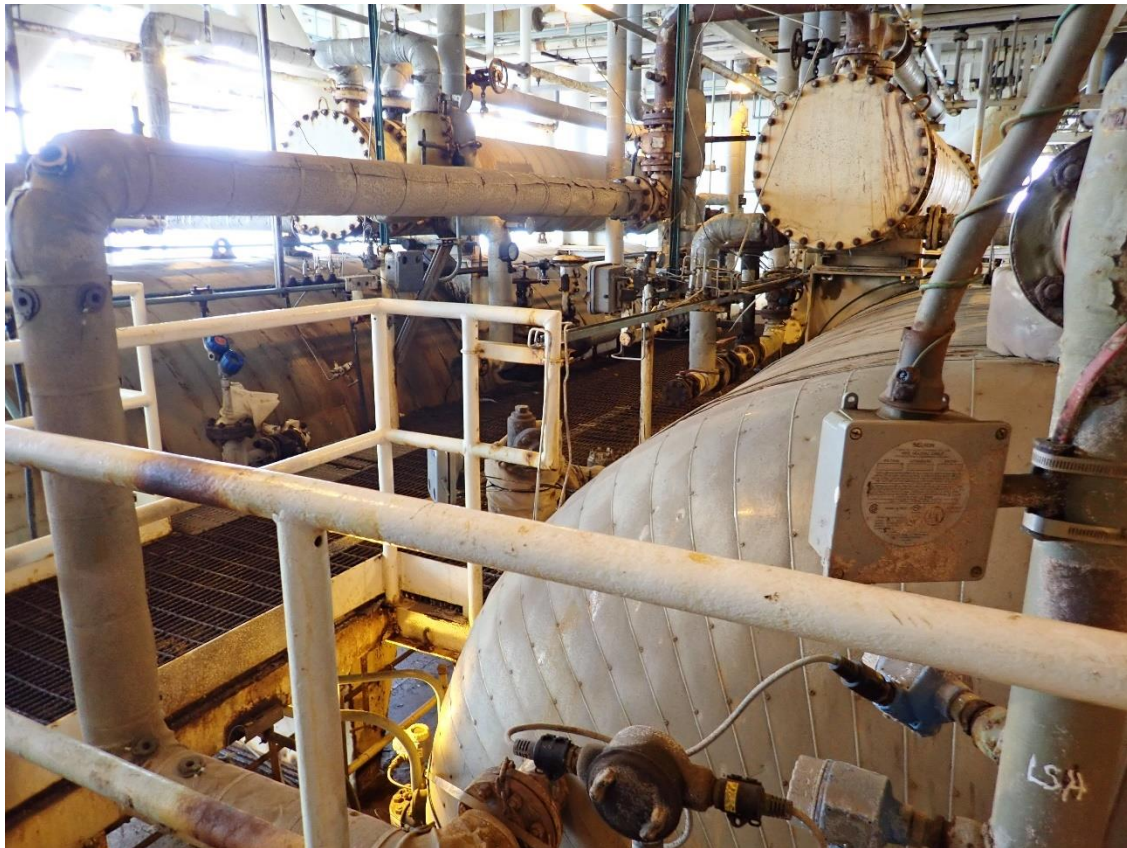
Appendix 1 – Photograph Log

Appendix 2 - Daily Production Report for September 22, 2019

Appendix 3 – Example Chemical Inventory of Well Treatment, Completion and Workover Fluids

Appendix 1 – Photograph Log

The photographs were taken during the inspection by Adam Howell using an Olympus Tough TG-5 Digital Camera. Original copies of the photos are maintained by EPA Region 9.



Photograph 1: Production Deck Oil Water Separator Tanks



Photograph 2: RedFox Marine Sanitation Device



Photograph 3: Desalination reverse osmosis (RO) water treatment system



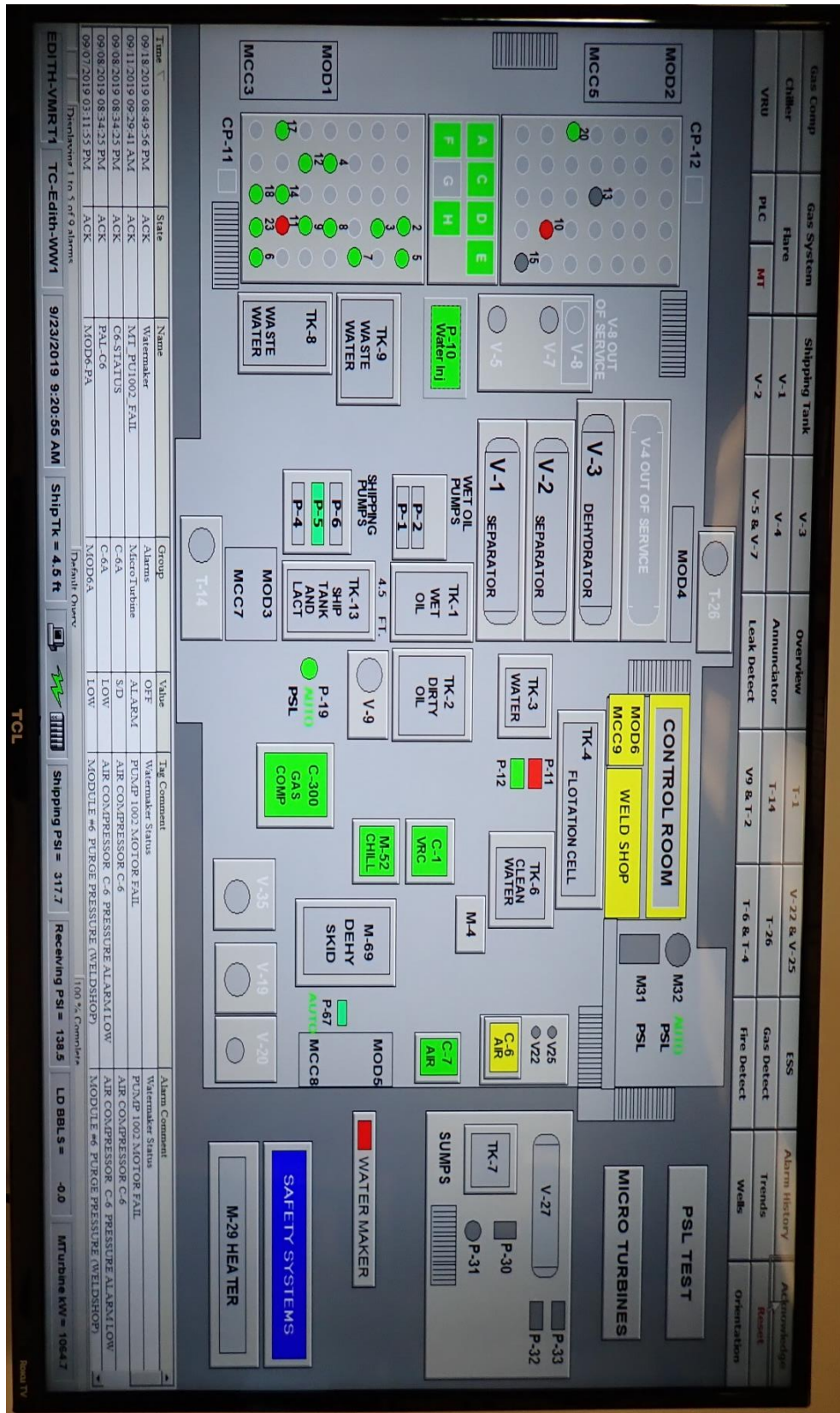
Photograph 4: WEMCO oil water separator



Photograph 5: Tank 7 or Deck Drainage sump tank located on Subdeck



Photograph 6: Tank 8 (left) and Tank 9 (right) located on Production Deck



Photograph 7: Production Deck computer control screen



Photograph 8: Tank 6 NPDES sampling point for Produced Water (002)



Photograph 9: Capstone microturbines located on the Drill Deck



Photograph 10: Winch to lower the submersible pump to pump out the Discharge 002 open-bottom discharge tank 160 feet underwater.

Platform Edith					
Oil and Grease Monitoring with Bench Type Turbidity Meter HACH 2100Q High Set Point 30 NTU					
Year prior to the permit effective date, Platform Edith discharged 19,646 Gallons/Day					
As per the permit, Edith has to monitor once every 4 hours. If Turbidity exceeds 30 NTU, operator has to take some corrective action					
Date	Time	NTU	Action Taken	Operator	Comments
9-20-19	00:00				
	8:00	12.6		SOC	
	12:00	9.8		SOC	
	16:00	9.2		SOC	
	20:00	12.9		JH	Discharge
9-21-19	0:00	10.2		JH	"
	4:00	14.4		JH	"
	8:00	10.7		SOC	
	12:00	11.2		SOC	
	16:00				
	20:00	12.0		JH	Discharge
9-22-19	0:00	14.6		JH	Discharge
	4:00	10.2		JH	
	8:00	8.5	6.9 O&G	SOC	6.9 O&G & GREASE
	12:00	11.0		SOC	
	16:00	9.3		SOC	
	20:00	12.7		JH	Discharge
9-23-19	0:00	16.6		JH	"
	4:00	14.3		JH	"
	8:00				
	12:00				
	16:00				
	20:00				
9-24-19	0:00				
	4:00				
	8:00				
	12:00				
	16:00				
	20:00				
9-25-19	0:00				
	4:00				

Photograph 11: Log book of turbidity monitoring for Produced Water (002) from Tank 6

Platform Edith					
Oil and Grease Monitoring with Bench Type Turbidity Meter HACH 2100Q. High Set Point: 30 NTU					
Year prior to the permit effective date, Platform Edith discharged 19,649 Gallons/Day					
As per the permit, Edith has to monitor once every 4 hours. If Turbidity exceeds 30 NTU, operator has to take some corrective action					
Date	Operator	Calibration Required once in 3 months		Comments	
6-1-15	DM	20/100/800	Standard	Passed	
6-1-15	DM	20/100/800	Standard	Passed	
11-15-15	DM	20/100/800	Standard	Passed	
2-19-16	DM	20/100/800	Standard	Passed	
5-28-16	DM	20/100/800	Standard	Passed	
9-3-16	DM	20/100/800	Standard	Passed	
12-13-16	DM	20/100/800	Standard	Passed	
3-3-17	DM	20/100/800	Standard	Passed	
7-24-17	DM	20/100/800	Standard	Passed	
11-15-17	DM	20/100/800	Standard	Passed	
3-1-18	DM	20/100/800	Standard	Passed	
8-4-18	DM	20/100/800	Standard	Passed	
11-22-18	DM	20/100/800	Standard	Passed	
2-10-19	Q	20/100/800	Standard	Passed	
6-4-19	Q	20/100/800	Standard	Passed	

Photograph 12: Turbidimeter calibration log

EDITH					
WATER SAMPLING					
Container Type	Type of Sample	Type of Test	Method	Frequency	Limit
1 Glass Bottle (One Liter)	Produced Water	OIL & GREASE	EPA 1664	Every Thursday	<29 mg/l
1 Small plastic Bottle	Produced Water	Salinity	EPA 300	First Thursday of every month	N/A
1 Plastic Bottle(500ml)	Produced Water	Zinc	EPA200.7	First Thursday of March, June, Sep and Dec	
1 Plastic Bottle(100ml)	Potable Water	Total and Fecal coliform	9221	First Thursday of every month	Absent
1 Plastic bottle	Potable Water	Turbidity	EPA 180.1	First Thursday of every month	Absent

Photograph 13: Posted water sampling procedures for Produced Water (002)



Photograph 14: Deck Drainage discharge pipe to commingle with Produced Water discharge pipe. There did not appear to be any flow monitoring or sampling ports visible.

Appendix 2 - Daily Production Report for September 22, 2019



Platform Edith

Daily Production Report

Date: Sep 22, 2019

Oil:	423	Gas:	168	Water:	1209	Injected	661		
Crude Oil Production						Water			
Meter	Open	Close				Discharge:	548		
L.A.C.T. A	420,469	420,469	0			LACT cut	0.99		
L.A.C.T. B	776,775	777,196	421			Active Wells:	14		
Tank 13 - Level	111	113	2			Tank 13 - Temp.	180		
Pipeline Pig:	Launch (Time)	Receive (Time)	No. of Pigs	Chem. Type	Batch Qty (gal)	Oil - Total: (bbls)	9,450		
Oil:						Oil - Average: (bpd)	430		
Gas:						Flare - Total: (mcf)	104,000		
Oil Pipeline:	MAOP: (psig)	786	Actual Pressure: (psig)	290		Flare - Duration: (min)	933		
Natural Gas:	Total		Total		Comments				
Compressor Intake	229.0	Eva Gas Usage	186						
Fuel Gas	22.0	Edith Gas to M/T	146						
	Total		Duration		Reason				
High Pressure Flare									
EVA Gas Flare	2		30		Two Turbines Down				
	Total	Opening	Closing	Duration					
Low Pressure Flare	0	4289.0	4289						
	Opening	Closing	Micro Turbines		Total Used				
C-600 mcf	75810	75860	50						
C-1000 mcf	206293	206575	282		332				
Kw Hours	20147111	20172434	25323						
Water Injection									
Well	Well Head Press.	Casing Press	BBIs P/D	Totals BBIs injected					
B-13	460	80	218	223					
B-15	320	180	180	438					
Active Wells Down									
Well	Down Since	Hrs. Down	Well Type	Net Prod.	Reason Down / Comments				
Chemical Information									
Chemical	Price (per qt.)	Gal / in.	Open (in.)	Close (in.)	Qts. Used	Daily Costs (\$'s)	Comments		
CSW 4056	\$ 2.69	6	13.65	13.5	3.6	\$ 9.68			
DMO-7033	\$ 5.75	3	12.5	12.25	3	\$ 17.25			
RBW 6060	\$ 4.83	3.4	5.25	5	3.4	\$ 16.42			
XC-402	\$ 8.44	3.1	9.7	9.7	0	\$ -			
PAO103	\$ 3.43	2.12	17.25	17.1	1,272	\$ 4.36			
					TOTAL:	\$ 47.72			
Well Test									
Well	Gross	Net	Water	Cut (%)	Csg. Press	Flow line	FLOP	SPM / Htz.	Hrs. Tested
		0	0						
		0	0						
		0	0						
		0	0						
		0	0						
		0	0						
Vacation / Sick									
CONTRACTORS									
Comments / Equipment Down Time									
2 flare+186=188 Eva gas									

Appendix 3 – Example Chemical Inventory of Well Treatment, Completion and Workover Fluids

PLATFORM EDITH				
CHEMICAL INVENTORY				
Sep 1, 2016 thru Nov 30, 2016				
Chemical	Well No.	Estimated Vol/Wt.	Date	Estimated Volume Discharged BBLs
PEP2HF(Petrolite) Chemical Soak for Wax Build up	B-20	100 Gallons	11/24/2016	None